

I. Amendments to the claims

This listing of claims replaces all prior versions of the claims.

Listing of claims

Claim 1. (Currently amended) A method of filling with powder a container having an open end, the method including: positioning an outlet of a hopper containing powder above the open end of the container; mechanically agitating the hopper so as to cause powder to be transferred from the hopper to the container; and mechanically agitating the container; wherein the hopper and the container are clamped together and the steps of mechanically agitating include tapping the clamped hopper and ~~and/or the~~ container by at least a predetermined amount sufficient to ensure that the container is filled with powder at a predetermined density.

Claim 2. (Original) A method according to claim 1 further including: using the volume of the container to define a predetermined volume for the powder.

Claim 3. (Previously presented) A method according to claim 2 further including: filling the entire volume of the container with powder, the volume of the container equaling the predetermined volume.

Claim 4. (Original) A method according to claim 3 further including: for at least some of the step of mechanically agitating the hopper, spacing the outlet of the hopper away from the open end of the container so as to overfill the container; and after the steps of mechanically agitating, removing excess powder from the open end of the container.

Claim 5. (Original) A method according to claim 3 further including; positioning the outlet of the hopper across the open end of the container such that the container is filled level with the open end.

Claim 6. (Original) A method according to claim 2 further including: positioning the outlet of the hopper at a predetermined level within the container so as to define, with the container, the predetermined volume, the predetermined volume being smaller than the volume of the container.

Claim 7. (Previously presented) A method according to claim 1 further including: providing the outlet of the hopper with one of an orifice, mesh, screen and grid to separate the powder in the hopper from the container.

Claim 8. (Original) A method according to claim 7 further including: providing the orifice, mesh, screen or grid with a hole-size small enough that bulk density powder will not flow through under gravity, but large enough to allow powder to fall through during the step of mechanically agitating.

Claim 9. (Original) A method according to claim 7 or 8 further including: providing the orifice, mesh, screen or grid with a hole-size of approximately 0.5 mm.

Claim 10. (Canceled).

Claim 11. (Previously presented) A method according to claim 1 wherein the steps of mechanically agitating include lifting the hopper and container by 1 to 10 mm, then letting the hopper and container fall under gravity to a substantially fixed position.

Claim 12. (Previously presented) A method according to claim 1 wherein the step of mechanically agitating provides an acceleration of approximately 1000 G to powder in the hopper and container.

Claim 13. (Currently amended) A method according to claim 1 wherein the steps of mechanically agitating include tapping the clamped hopper and and/or the container between 50 and 500 times.

Claim 14. (Canceled).

Claim 15. (Previously presented) A method according to claim 1 further including: tapping vibrating the hopper and/or container at a frequency between 100 Hz and 1 kHz.

Claim 16. (Previously presented) A method according to claim 1, 11 or 12 further including: providing a powder-tight seal between the hopper and container during at least part of the step of mechanically agitating the hopper.

Claim 17. (Canceled)

Claim 18. (Previously presented) A method according to claim 1 including: adjusting the amount of mechanical agitation of the container so as to vary the density of the powder in the container, thereby compensating for batch-to-batch variations in the powder.

Claim 19. (Previously presented) A method according to claim 1 wherein at least the step of mechanically agitating the container provides impulses to the powder in a direction from the open end of the container into the container.

Claim 20. (Previously presented) A method of simultaneously filling with powder a plurality of containers having respective open ends, the method including: providing a hopper having a plurality of outlets positioning the plurality of outlets above corresponding open ends of the containers; and simultaneously conducting the method of claim 1, 11 or 12 for each container.

Claim 21. (Currently amended) An apparatus for filling with powder a container having an open end, the apparatus including: a support for the container; a hopper having an outlet and being selectively moveable relative to the support to position the outlet above the open end of a supported container; a clamp for clamping the hopper and the container together; a dispenser for mechanically tapping the hopper ~~and/or~~ and the container so as to cause powder to be transferred from the hopper to the container, the dispenser being arranged to tap the clamped hopper and container; and a controller for operating the dispenser by at least a predetermined amount sufficient to ensure that powder in the container reaches a predetermined density.